TITLE: Correlation of Human Papillomavirus Infection with Natural History of ASCUS and LSIL

AUTHORS: SH Hahn, HS Kim, WC Lee, SY Kang, YM Park, YJ Park

WORK AFFILIATION: Department of Pediatrics, Holy Family Hospital, The Catholic University of Korea

ADDRESS: 2 Sosa-dong, Wonmi-gu, Pucheon, Kyounggi-do 420–717, Korea

BACKGROUND: Understanding the natural history of cytologic abnormalities is imperative in providing the guideline of cervix cancer screening and/or clinical decision making. Also, it is important to identify the natural history of cytologic abnormalities according to the presence or type of HPV infection, which is known to be a necessary cause of cervical cancer.

OBJECTIVE: This study aims at analyzing the progression risk of cytologic abnormalities among high-risk HPV infection groups compared with low-risk HPV infection groups.

METHODS: From January 1, 1996 to December 31, 1999, 2,082 subjects who took the Pap test and the Human papillomavirus test at the OB/GYN clinic of Samsung Jeil hospital for screening of uterine cervical cancer were selected. Cox's proportional hazards regression model was used to estimate hazard ratio of progression of high-risk HPV infection among atypical squamous cells of undetermined significance (ASCUS) and low-grade squamous intraepithelial lesions (LSIL) groups.

RESULTS: The hazard ratio (HR) of progression in high-risk HPV infection groups compared with the low-risk HPV infection groups among cytologic abnormalities was as follows: reactive ASCUS, HR=2.67 (95% CL; 1.80–3.97); ASCUS favor SIL, HR=3.22 (95% CL; 1.72–6.93); LSIL, HR=1.09 (95% CL; 0.30–3.97). Notably, for reactive ASCUS aged under 40 years, HR=7.06 (95% CL; 1.66–30.05). Progression rates of high-risk HPV infection for 24 months were 42.06% for ASCUS and 9.22% for LSIL.

CONCLUSIONS: In conclusion, the risk of progression was higher in subjects with ASCUS compared to that of LSIL. In the case of reactive ASCUS with high-risk HPV infection, younger age groups had a higher progression risk than any other age group, so intensive follow-up seems necessary.

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ABSTRACTS

TITLE: What Happens When Organization of Cervical Cancer Screening Is Delayed or Stopped?

AUTHORS: E Lynge, LB Clausen, R Guignard, P Poll

WORK AFFILIATION: Institute of Public Health, University of Copenhagen

ADDRESS: Østre Farimagsgade 5, Oog. B, Postbosk 2099, DK 1014 København K, Denmark

KEYWORDS: cervical cancer screening

BACKGROUND: Many countries rely on opportunistic screening, and data on its effectiveness are asked for.

OBJECTIVE: We assessed the impact on cervical cancer incidence and mortality of opportunistic screening compared with organized screening.

METHODS: Data on women aged 30 to 64 years in 16 Danish counties from 1973 to 2002. Cumulative incidence and mortality rates for women aged 30 to 64 by county. Poisson regression of incidence and mortality rates by age, calendar period, and county. Interaction between type of county and calendar period measured the difference in time trend between countries with screening organized early compared with late in time.

RESULTS: A statistically significant interaction was found between type of county and calendar period, $p = 0.0151$, for cervical cancer incidence but not for cervical cancer mortality, $p = 0.9593$. The interaction terms were not statistically significant when a comparison was made between a single county in which an organized programme was interrupted for an 11-year period and other counties. There was, however, a statistically significantly increased cumulative incidence rate at the restart of the organized programme.

TITLE: The Cervical Cancer Screening Program in Norway, 1992–2004: Changes in Pap-Smear Coverage and Cervical Cancer Incidence

AUTHORS: JF Nygård, GB Skare, R Steen, SØ Thoresen

WORK AFFILIATION: Institute of Population-Based Cancer Research, Oslo, Norway

ADDRESS: Montebello, N–0310 Oslo, Norway

OBJECTIVES: Changes in the incidence rate of cervical cancer are studied to assess the impact of the Norwegian coordinated cervical cancer screening program introduced in 1995. Attention is given to whether recommendation letters sent to women without a Pap smear in the previous 3 years can be an alternative to a conventional screening program that invites women irrespectively of their spontaneous screening. In this population-based, nationwide screening program, women 25–69 years old are recommended a conventional Pap smear every 3 years.

METHODS: The impact of the screening program is assessed indirectly by comparing trends in invasive cervical cancer in the 3-year period prior to the implementation of the program (1992–94) with the three first screening rounds (1995–97, 1998–2000, and 2001–04), with respect to changes in coverage and interval between Pap smears in the same time periods. All Pap smears taken from women in all ages are included (i.e., a total of 6,776,956 Pap smears from more than 1.5 million women). Further, the impact is assessed directly by comparing the screening results of women recruited by the program with women who regularly had Pap smears.

RESULTS: In the last year observed (2004), the invasive cancer incidence rate was 23% lower than in the period prior to the program. After implementation of the coordinated screening program, the coverage increased, especially among women 50–69 years old. However, the number of smears taken decreased by 10%, as the interval after a normal smear was longer, especially in young women. The newly recruited women had 3 times the risk of having a high-grade precursor and 20 times higher risk of cancer than the women who had had regular smears.

CONCLUSIONS: The coordinated screening program has increased the coverage, which consequently has reduced the rate of invasive cervical cancer.

The choice of mainly recommendation letters only to women who do not opportunistically have Pap smear has reduced the number of Pap smears being taken.

TITLE: Cervical Cancer Screening in Manitoba: Evaluating Cancer Risk, Pap Test Utilization, and Access

AUTHORS: K Decker, A Demers, D Chateau, M Harrison, G Musto, Z Nugent

WORK AFFILIATION: CancerCare Manitoba

ADDRESS: 5–25 Sherbrook Street, Winnipeg, Manitoba R3C 2B1, Canada

KEYWORDS: cervical cancer, screening, health services accessibility

INTRODUCTION: This case control study compared the risk of cervical cancer among women who received regular Pap tests and those who received irregular or no Pap tests and determined if these women had the same access to physicians (opportunity to be screened). This study also examined whether there was a relationship between physician characteristics and the probability of a woman being screened. A possible reduction in cervical cancer if all women were adequately screened was calculated.

METHODS: Manitoba female residents 18 years of age and older who were diagnosed with invasive cervical cancer between 1989 and 2001 (n=678) were identified through the Manitoba Cancer Registry and matched by age and area of residence to 3,361 controls identified using the Manitoba Health Client Registry. The Manitoba Physician Claims Database was used to determine Pap test utilization and hysterectomy status. Physician data was abstracted from the Physician Master File and the Physician Claims database. Statistics Canada Census data were used to examine socioeconomic variables.

RESULTS: Women who never had a Pap test were 2.78 times as likely to be diagnosed with invasive cervical cancer compared to women who had had one Pap test ($p < 0.0001$). Each additional Pap test significantly reduced the likelihood of being diagnosed with cervical cancer (OR = 0.91, $p < 0.0001$). There was also a significant difference in the number of Pap tests between cases and controls in the 5 years prior to diagnosis ($p < 0.0001$). The rate of Pap tests among the controls was 1.61 times the rate among the cases. However, there was no difference in the average number of physician visits between cases and controls ($p = 0.222$).

CONCLUSIONS: Although women who were diagnosed with invasive cervical cancer had fewer Pap tests, they had the same average number of physician visits. Therefore, there was no difference in the opportunity to be screened for cases and controls.

Note: Physician characteristics results and the reduction in cervical cancer are currently being analyzed and will also be presented.

TITLE: Education of the General Public: HPV and Its Involvement in Cervical Carcinogenesis

AUTHOR: P Davies

WORK AFFILIATION: European Cervical Cancer Association

ADDRESS: 68 Cours Albert Thomas, 69008 Lyon, France

KEYWORDS: cervical cancer, education, communications

The classification of high-risk human papilloma virus (HR-HPV) as a necessary cause of cervical cancer has led to increasing interest in the use of HPV testing for cervical cancer screening and prophylactic vaccination for primary prevention of cervical cancer. However, awareness of HPV among the general public is extremely low, and the majority of people who have heard about HPV associate it with genital warts, which are caused predominantly by low-risk HPV types 6 and 11. Very few people know about the HR-HPV types, although they are far more common. This situation is made worse because the information that is currently available to the general public often presents confusing and conflicting messages that can have little connection with the facts as they are known today. Further, many medical professionals do not have a sufficient understanding of HR-HPV to effectively answer their patients' questions.

The issue of low public awareness of HR-HPV is of great concern, as this could present a barrier to the use of new technologies should they be found to offer sufficient benefits to merit their implementation. It is therefore extremely important for the general public to have reliable sources of consistent and accurate information on both low- and high-risk HPV infection. In addition, it is essential for health care professionals to have up-to-date, evidence-based information so that they can provide authoritative answers to their patients' questions and, thereby, support the overall educational process.

In order to address this situation, the European Cervical Cancer Association has partnered with gynaecology, dermatovenereology, and cancer societies from across Europe to develop consensus, evidence-based educational materials on HPV and its involvement in cervical carcinogenesis for use in each European country. This process has now produced a number of introductory and second-level informational materials for the general public, together with complementary materials for health care professionals. The process by which these materials were developed will be summarized and examples of the materials will be presented.